DNR DIRECTION OF NATURAL RESIDENCE OF NATURAL RESID

Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12108 Entry Year 2015 Acreage: 1,149

County Dickinson

Management Area: Cassidy Creek

Revision Date: 2013-07-18

Stand Examiner:

Legal Description:

T40N R28W Sections 29,30

Identified Planning Goals:

Optimize sustainable timber production while enhancing and protecting wildlife habitat. Protect riparian areas during management activities.

Soil and topography:

There is much variation in both soil types and topography. The soil ranges from Pemene and Emmet rock outcrop complexes on the steep peaks to well drained Karlin Loamy fine sands on the ridges and Carbondale - Cathro mucks on the very poorly drained areas near the creeks and lowlands. Some terrain within this compartment is very steep and rocky.

Ownership Patterns, Development, and Land Use in and Around the Compartment:

This compartment is almost contiguous State owned land with a couple isolated private owned parcels. It is almost entirely surrounded by State land. This area is heavily utilized by ORVs, snowmobiles, hunters, and dispersed campers.

Unique Natural Features:

Cassidy Creek

Archeological, Historical, and Cultural Features:

No Archeological, Historical, or Cultural Features known.

Special Management Designations or Considerations:

Watershed and Fisheries Considerations:

Cassidy Creek is located within this compartment.

Wildlife Habitat Considerations:

This rugged compartment was historically dominated by hemlock and white pine, and is predominately aspen, now. Proposed treatments will be designed to protect and enhance species diversity and structural diversity, rugged, unharvested portions will provide mature forest condition features for species that require them.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of thin to discontinuous glacial till over bedrock. There is insufficient data to determine the glacial drift thickness. The Precambrian Archean granite/gneiss outcrops beneath the glacial drift. There is not a current economic use for these rocks, although the granite/gneiss has building stone potential. Abandoned iron mines are located approximately two miles to the south. This compartment was previously leased for metallic exploration and potential may still exist. A gravel pit is located three miles to the west and there may be some potential. There is no economic oil and gas production in the UP.

Vehicle Access:

Vehicle access is fair. The Eastern half of Compartment 108 is easily accessed by vehicles, while the Western half has ORV access only. The Cassidy Creek Road serves as the main access point.

Survey Needs:

None.

Recreational Facilities and Opportunities:

This area is heavily utilized by ORVs, snowmobiles, hunters, and dispersed campers. The Norway ORV trail and a snowmobile trail all are present within Compartment 108.

Fire Protection:

Located within Norway's fire protection area. Access is good for fire equipment however the rocky areas will provide operational challenges.

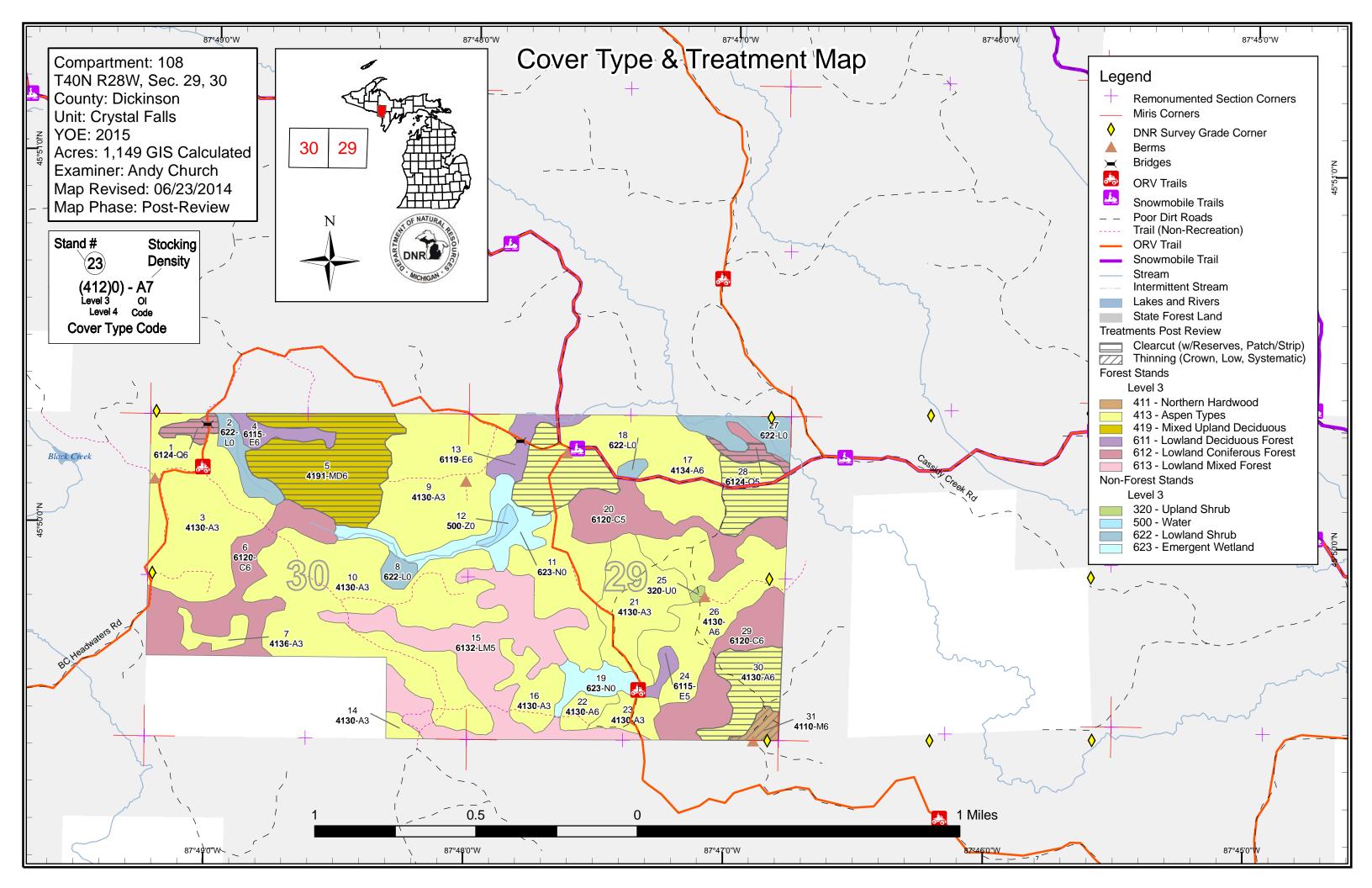
Additional Compartment Information:

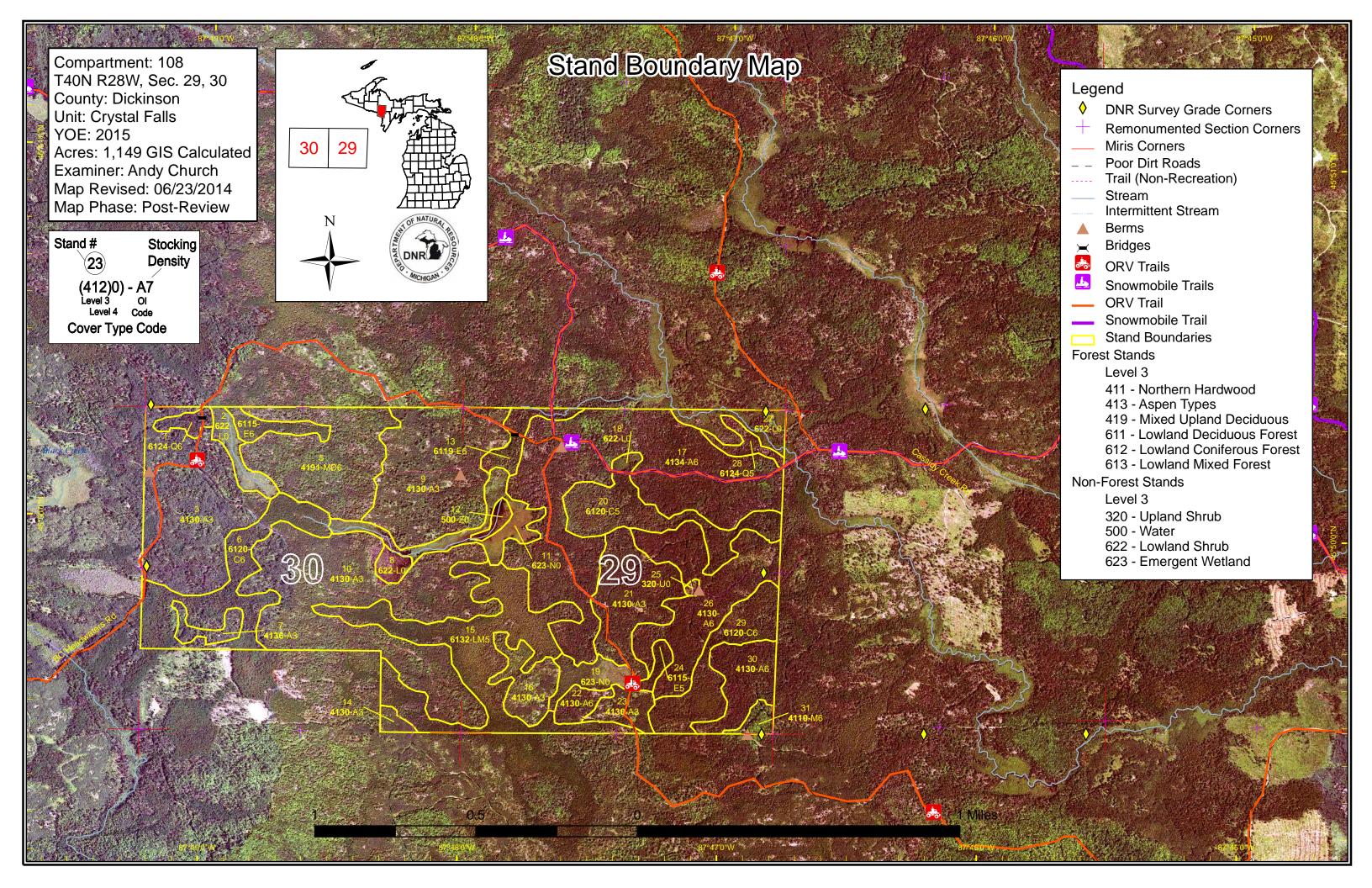
The following reports from the Inventory are attached:

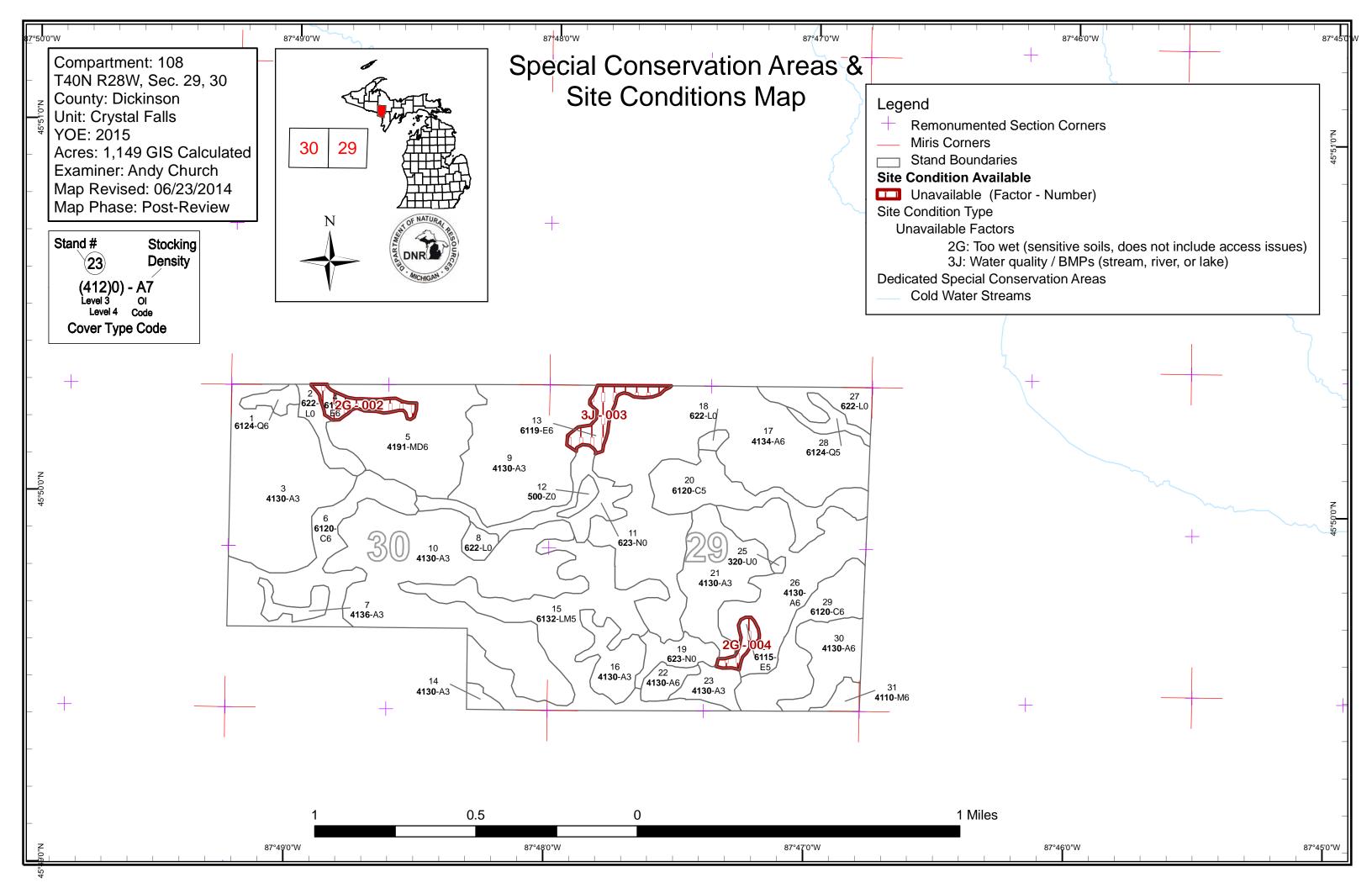
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

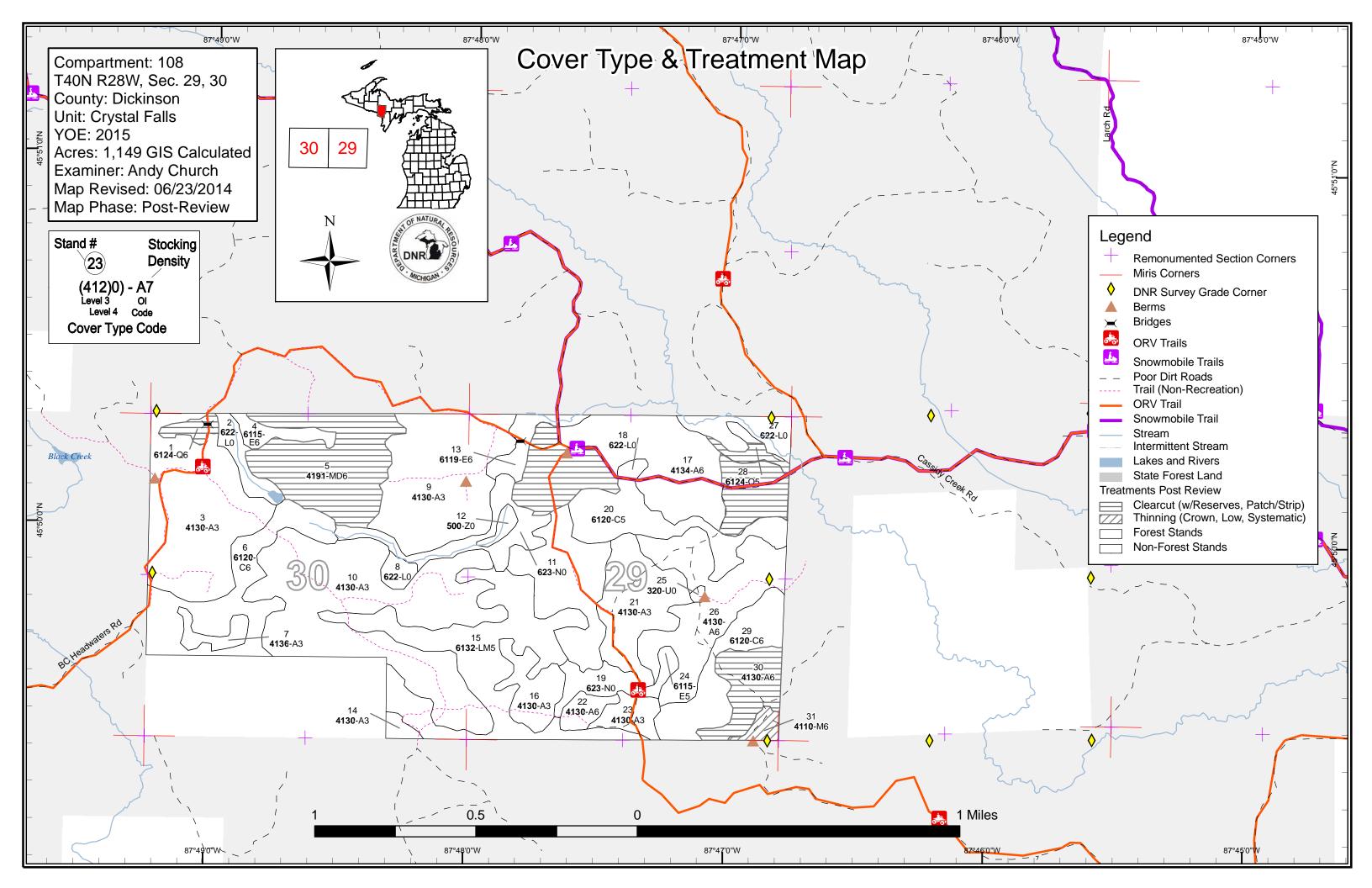
The following information is displayed, where pertinent, on the attached compartment maps:

Base feature information, stand boundaries, cover types, and numbers Proposed treatments
Site condition boundaries
Details on the road access system









Compartment 108 Year of Entry 2015

Crystal Falls Mgt. Unit
Andrew Church : Examiner



Age Class

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Aspen	0	0	174	0	253	659	0	0	0	0	0	0	0	0	0	0	0	0	1086
Cedar	0	0	0	0	0	0	0	0	38	0	101	0	0	0	0	0	0	0	139
Lowland Conifers	0	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	14
Lowland Deciduous	0	0	0	0	0	0	0	0	0	10	18	0	0	0	0	0	0	0	28
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	98	0	0	0	0	0	0	0	0	98
Lowland Shrub	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38
Marsh	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	145	0	0	0	0	0	0	0	0	145
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	6
Upland Shrub	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Water	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Total	83	0	174	0	253	659	0	0	38	253	139	0	0	0	0	0	0	0	1599



Report 2 – Treatment Summary

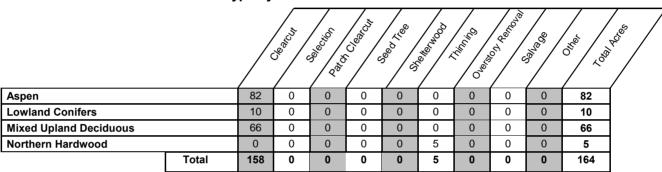
Crystal Falls Mgt. Unit Year of Entry: 2015

Acres of Harvest

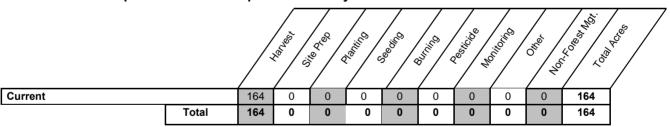
Compartment 108
Total Compartment Acres: 1,149

Commercial Harvest - 164 Harvests with Site Condition - 0 Next Step Harvest - 0 Habitat Cut - 0

Cover Type by Harvest Method



Proposed and Next Step Treatments by Harvest Method



Compartment: 108 Year of Entry: 2015



a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
1	12108001-Cut	5.9	6124 - Lowland Spruce-Fir	Poletimber Well	91	Unspec ified	Harvest	Clearcut with Retention	6117 - Lowland Deciduous, Mixed Coniferous	Even-Aged	Field Boundary

Specs:

Prescription Final Harvest using 2" spec. Leave all: Cedar, Hemlock, Oak, and Pine if found. Buffer unnamed stream to East 100 feet. If bed and bank found within stand during setup, do not treat as entire stand would be within no cut buffer. Frozen or dry ground harvesting only.

ACCEPTABLE ALTERNATIVE REGEN: Spruce/Fir RETENTION: Cedar, Hemlock, Oak, Pine, Buffer

Next Step

Treatments:

Acceptable Regen:

Other Comment: Mortality on the White Spruce and Fir from budworm. Some light budworm damage on Black Spruce. Drainage through middle, no bed and bank found during inventory. Unnamed perrenial stream to East. May be too late for useable wood on the Fir and White Spruce. Old next step

comments: Regen check

10/1 /2014

Proposed Start Date:

Site Condition: None

83 Unspec 4139 - Aspen, Even-Aged Field Boundary 12108005-Cut 65.7 4191 - Mixed Poletimber Harvest Clearcut with **Upland Deciduous** Well ified Retention Mixed with Conifer Deciduous

Prescription Final Harvest using 2" spec. Leave all Cedar, Hemlock, Pine, Oak. Buffer stream to South 100 feet.

RETENTION: Cedar, Hemlock, Pine, Oak, Buffers, and what cannot be physically harvested. Specs:

ACCEPTABLE ALTERNATIVE REGEN: Maple/Fir

Next Step Treatments:

<u>Acceptable</u> Regen:

Other Comment: Mortality on the Spruce/Fir due to budworm. Most of Aspen died out of stand from over-maturity. Dying White Birch pocket in South Central part of stand. Terrain very rugged with rock and water. Lowland areas mixed among the uplands. Large White Pines scattered in overstory. Trace amounts of White Ash and Ironwood present. Access for equipment is limited due to the rocks. Regen may take longer due to low Aspen volumes. Old next step comments: Regen check

Proposed Start Date: 7 /1 /2014

Site Condition: None

12108017 Cut 54.9 4134 - Aspen. Poletimber 43 Unspec Harvest Clearcut with 4130 - Aspen Even-Aged Field Boundary Spruce/Fir Well ified Retention

Prescription Final Harvest using 2" spec. Leave all Cedar, Hemlock, Oak, and Pine. Buffer creeks 100 feet.

Specs:

RETENTION: Cedar, Hemlock, Oak, Pine, Buffer ACCEPTABLE ALTERNATIVE REGEN: Maple/Fir

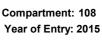
Next Step **Treatments:**

Acceptable Regen:

Other Comment: Portions of this stand should be harvested due to outbreak of spruce budworm. The understory is thick Balsam Fir. All Spruce and Fir in entire stand, whether in overstory or understory, is being hit really bad by budworm. Identify areas heavy to Spruce/Fir for harvesting. Scattered large dead Spruce in overstory. This large diameter Spruce seems to be getting hit the worst by the budworm. A couple small hardwood pockets near the Cassidy Creek rd. Drainages mixed throughout. Shallow soils on top of rocks. Large Pines scattered within stand. Old next step comments: Regen check

Proposed Start Date: 7 /1 /2014

Site Condition: None





a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
28	12108028-Cut	4.4	6124 - Lowland Spruce-Fir	Poletimber Medium	90	Unspec ified	Harvest	Clearcut with Retention	6117 - Lowland Deciduous, Mixed Coniferous	Even-Aged	Field Boundary

Prescription Final Harvest using 2" spec. Leave all: Cedar, Hemlock, Pine, Oak if found. Buffer Cassidy Creek 100 ft. Frozen ground operations

Specs: recommended.

ACCEPTABLE ALTERNATIVE REGEN: Swamp HDWDS/Fir

RETENTION: Cedar, Hemlock, Pine, Oak, Buffer

Next Step Treatments:

S

Acceptable Regen:

Other Much mortality on the White Spruce and Balsam Fir. Very thick understory because overstory is open. Low BA's 10-50. I beleive this portion of

Comment: Cassidy Creek is not designated trout stream. Expect Tamarack to regenerate best. Old next step comments: Regen check

Proposed Start Date: 7 /1 /2014

Site Condition: None

30 12108030-Cut 27.3 4130 - Aspen Poletimber 43 Unspec Harvest Clearcut with 413 - Aspen Even-Aged Field Boundary Well ified Retention

Prescription Final Harvest using 2" spec. Leave all Cedar, Hemlock, Oak, and Pine.

Specs: RETENTION: Cedar, Hemlock, Oak, Pine

ACCEPTABLE ALTERNATIVE REGEN: Maple/Fir

Next Step Treatments:

Acceptable Regen:

Other Majority of stand is 41 yr old Aspen but some were aged at 78. Much mortality due to budworm. Understory HEAVY to Fir saplings. All being decimated by budworm. Scattered supercanopy pines found. Understory hardwoods are heavily browsed. Could harvest if needed for age class

diversity. Old next step comments: Regen check

Proposed Start Date: 7 /1 /2014

Site Condition: None

31 12108031-Cut 5.4 4110 - Sugar Maple Poletimber 90 111- Harvest Low Thinning 4110 - Sugar Even-Aged Field Boundary Association Well 140 Maple Association

<u>Prescription</u> Thin to 80 RBA. Leave all: Cedar, Hemlock, Oak, and Pine if found. Extend treatment boundary into adjacent compartments if needed.

Specs:

Next Step Treatments:

Acceptable Regen:

Other Poor quality hardwood stand.

Comment:

Proposed Start Date: 7 /1 /2014

Site Condition: None

Total Treatment

Acreage Proposed: 163.6

Crystal Falls Mgt. Unit

Andrew Church : Examiner Year of Entry: 2015

Dominant Site Conditions

3J 5E

Aspen		8
Cedar		0
Lowland Conifers		3
Lowland Deciduous	13	
Lowland Mixed Forest		
Lowland Shrub		0
Marsh		
Mixed Upland Deciduous		4
Northern Hardwood		
Upland Shrub		
Water		
Total Forested Acres	13	16
Relative Percent		

2 Unavail Comments:	soils	Too wet (sensitive s, does not include access issues)	8	Unspecified	Unspecified	Unspecified	Unspecified
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Silavan		ater quality / BMPs eam, river, or lake)	13	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
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4	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	5	Unspecified	Unspecified	Unspecified	Unspecified
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11	Unavailable	5E: Long-Term Retention	1	1C: Other dept or div proc/practices	Unspecified	Unspecified	Unspecified
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Andrew Church : Examiner

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Crystal Falls Mgt. Unit

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(Comments:						
7	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
3	Unavailable	5E: Long-Term Retention	1	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
(Comments:						
9	Unavailable	5E: Long-Term Retention	0	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
10	Unavailable	5E: Long-Term Retention	3	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
(Comments:						

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11	Unavailable	5E: Long-Term Retention	1	1C: Other dept or div proc/practices	Unspecified	Unspecified	Unspecified
C	omments:						
12	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
C	omments:						

Crystal Falls Mgt. Unit

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Dominant Site Conditions

3J 5E

Aspen		8
Cedar		0
Lowland Conifers		3
Lowland Deciduous	13	
Lowland Mixed Forest		
Lowland Shrub		0
Marsh		
Mixed Upland Deciduous		4
Northern Hardwood		
Upland Shrub		
Water		
Total Forested Acres	13	16
Relative Percent		

2 Unavail Comments:	soils	Too wet (sensitive s, does not include access issues)	8	Unspecified	Unspecified	Unspecified	Unspecified
	S :						
Unavai							
Silavan		ater quality / BMPs eam, river, or lake)	13	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
Comments	3 :						

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4	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	5	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
5	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
ŝ	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
7	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
3	Unavailable	5E: Long-Term Retention	1	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
(Comments:						
9	Unavailable	5E: Long-Term Retention	0	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
10	Unavailable	5E: Long-Term Retention	3	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
(Comments:						

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11	Unavailable	5E: Long-Term Retention	1	1C: Other dept or div proc/practices	Unspecified	Unspecified	Unspecified
C	omments:						
12	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
C	omments:						

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Dominant Site Conditions

3J 5E

Aspen		8
Cedar		0
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Lowland Deciduous	13	
Lowland Mixed Forest		
Lowland Shrub		0
Marsh		
Mixed Upland Deciduous		4
Northern Hardwood		
Upland Shrub		
Water		
Total Forested Acres	13	16
Relative Percent		

2 Unav	vailable nts:	2G: Too wet (sensitive soils, does not include access issues)	8	Unspecified	Unspecified	Unspecified	Unspecified
Commer	nts:						
3 Unav	vailable	3J: Water quality / BMPs (stream, river, or lake)	13	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
Commer	nts:						

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4	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	5	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
5	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
ŝ	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
7	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
3	Unavailable	5E: Long-Term Retention	1	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
(Comments:						
)	Unavailable	5E: Long-Term Retention	0	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
10	Unavailable	5E: Long-Term Retention	3	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
(Comments:						

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11	Unavailable	5E: Long-Term Retention	1	1C: Other dept or div proc/practices	Unspecified	Unspecified	Unspecified
C	omments:						
12	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
C	omments:						

Compartment: 108

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Dominant Site Conditions

3J 5E

Aspen		8
Cedar		0
Lowland Conifers		3
Lowland Deciduous	13	
Lowland Mixed Forest		
Lowland Shrub		0
Marsh		
Mixed Upland Deciduous		4
Northern Hardwood		
Upland Shrub		
Water		
Total Forested Acres	13	16
Relative Percent		

*Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
2	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	8	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
3	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	13	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
(Comments:						

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4	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	5	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
5	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
6	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
7	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
8	Unavailable	5E: Long-Term Retention	1	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
	Comments:						
9	Unavailable	5E: Long-Term Retention	0	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
10	Unavailable	5E: Long-Term Retention	3	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
	Comments:						

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11	Unavailable	5E: Long-Term Retention	1	1C: Other dept or div proc/practices	Unspecified	Unspecified	Unspecified
C	omments:						
12	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
C	omments:						

Compartment: 108

Crystal Falls Mgt. Unit

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Dominant Site Conditions

3J 5E

Aspen		8
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Lowland Conifers		3
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Lowland Shrub		0
Marsh		
Mixed Upland Deciduous		4
Northern Hardwood		
Upland Shrub		
Water		
Total Forested Acres	13	16
Relative Percent		

*Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
2	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	8	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
3	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	13	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
(Comments:						

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: Examiner Year of Entry: 2015

4	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	5	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
5	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
6	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
7	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
8	Unavailable	5E: Long-Term Retention	1	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
	Comments:						
9	Unavailable	5E: Long-Term Retention	0	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
10	Unavailable	5E: Long-Term Retention	3	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
	Comments:						

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11	Unavailable	5E: Long-Term Retention	1	1C: Other dept or div proc/practices	Unspecified	Unspecified	Unspecified
C	omments:						
12	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
C	omments:						

Mgt. Unit

Compartment: #Type! Year of Entry:



Report 6 - PROPOSED SPECIAL CONSERVATION AREA* (SCA) DETAILS

* This is a partial list of SCAs for this compartment. Not included are those areas identified under other Department initiatives (Natural Rivers, Deer Wintering Areas, etc.). Those will be identified in separate, future map and report products.

SCA Name	SCA Category	Detail Type	Recommendation	Acres
Comments				

Mgt. Unit Compartment:

Year of Entry



Report 7 - EXISTING SPECIAL CONSERVATION AREA DETAILS

* This is a list of SCA's for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to the Special Conservation Area Map for locations of the below listed Conservation Areas.

ERA = Ecological Reference Area HCVA = High Conservation Value Area Conservation **Description Type** SCA = Special Conservation Area Area

s t	Crystal Falls	s Mgt. Unit		Report 8	- Forested	Stands Compartment: 108 Year of Entry: 2015
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	6124 - Lowland Spruce- Fir	Poletimber Well	6.1	91	Unspecified	Mortality on the White Spruce and Fir from budworm. Some light budworm damage on Black Spruce. Drainage through middle, no bed and bank found during inventory. Unnamed perrenial stream to East. Salvage ASAP. May be too late for useable wood on the Fir and White Spruce.
3	4130 - Aspen	Sapling Well	94.6	31	Unspecified	Starting to rach merchantability size. Scattered supercanopy conifers throughout. Very rocky terrain with small lowland inclusions. Drainages everywhere.
4	6115 - Lowland Ash	Poletimber Well	9.8	83	Unspecified	Cattails in understory
5	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	72.5	83	Unspecified	Mortality on the Spruce/Fir due to budworm. Most of Aspen died out of stand from over-maturity. Dying White Birch pocket in South Central part of stand. Terrain very rugged with rock and water. Lowland areas mixed among the uplands. Large White Pines scattered in overstory. Trace amounts of White Ash and Ironwood present. Access for equipment is limited due to the rocks.
5	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	72.5	83	Unspecified	Mortality on the Spruce/Fir due to budworm. Most of Aspen died out of stand from over-maturity. Dying White Birch pocket in South Central part of stand. Terrain very rugged with rock and water. Lowland areas mixed among the uplands. Large White Pines scattered in overstory. Trace amounts of White Ash and Ironwood present. Access for equipment is limited due to the rocks.
6	6120 - Lowland Cedar	Poletimber Well	57.7	92	Unspecified	More Black Ash in far Northern portion. Heavy Tag understory in the openings.
7	4136 - Aspen, Mixed Conifer	Sapling Well	8.3	31	Unspecified	Majority of stand is starting to reach merchantibility size. Rock island in the middle of swamp. Some trees left in overstory from last harvest due to operability problems. Excellent Fir regen. Many pockets of upland Cedar not harvested last time.
9	4130 - Aspen	Sapling Well	89.2	17	Unspecified	Large supercanopy White Pines scattered throughout. Not a clean cut due to operablility probems with the rock and water. Most of stand harvested.
10	4130 - Aspen	Sapling Well	150.4	31	Unspecified	Starting to reach merchantability size. Scattered supercanopy conifers throughout. Very rocky terrain with small lowland inclusions. Drainages everywhere.
13	6119 - Mixed Lowland Deciduous Forest	Poletimber Well	12.8	96	Unspecified	Stream through middle. Mortality on Spruce/Fir.
14	4130 - Aspen	Sapling Well	3.9	17	Unspecified	Cut with sale in Comp 109.
15	6132 - Mixed Lowland Forest with Cedar	Poletimber Medium	98.2	80	Unspecified	Several fingers of pure Black Ash. Main body of stand is heavy to Cedar. Smaller diameters than surrounding lowlands.

S t	Crystal Falls	Crystal Falls Mgt. Unit			B – Forested	Stands Compartment: 108 Year of Entry: 2015
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
16	4130 - Aspen	Sapling Well	21.3	17	Unspecified	Some overstory trees left from harvest. Very patchy harvest last time leaving clumps of conifers mixed throughout.
17	4134 - Aspen, Spruce/Fir	Poletimber Well	174.9	43	Unspecified	Portions of this stand should be harvested due to outbreak of spruce budworm. This harvest is to salvage the dead Spruce/Fir. The understory is thick Balsam Fir. All Spruce and Fir in entire stand, whether in overstory or understory, is being hit really bad by budworm. Identify areas heavy to Spruce/Fir for salvage. Scattered large dead Spruce in overstory. This large diameter Spruce seems to be getting the worst by the budworm A couple small hardwood pockets near the Cassidy Creek rd. Drainages mixed throughout. Shallow soils on top of rocks. Large Pines scattered within stand.
17	4134 - Aspen, Spruce/Fir	Poletimber Well	174.9	43	Unspecified	Portions of this stand should be harvested due to outbreak of spruce budworm. This harvest is to salvage the dead Spruce/Fir. The understory is thick Balsam Fir. All Spruce and Fir in entire stand, whether in overstory or understory, is being hit really bad by budworm. Identify areas heavy to Spruce/Fir for salvage. Scattered large dead Spruce in overstory. This large diameter Spruce seems to be getting the worst by the budworm A couple small hardwood pockets near the Cassidy Creek rd. Drainages mixed throughout. Shallow soils on top of rocks. Large Pines scattered within stand.
17	4134 - Aspen, Spruce/Fir	Poletimber Well	174.9	43	Unspecified	Portions of this stand should be harvested due to outbreak of spruce budworm. This harvest is to salvage the dead Spruce/Fir. The understory is thick Balsam Fir. All Spruce and Fir in entire stand, whether in overstory or understory, is being hit really bad by budworm. Identify areas heavy to Spruce/Fir for salvage. Scattered large dead Spruce in overstory. This large diameter Spruce seems to be getting the worst by the budworm A couple small hardwood pockets near the Cassidy Creek rd. Drainages mixed throughout. Shallow soils on top of rocks. Large Pines scattered within stand.
20	6120 - Lowland Cedar	Poletimber Medium	42.8	90	Unspecified	Bad windthrow along edges of stand. Within middle, small pockets of Cedar/Black Spruce. Veins of Black Ash throughout. Bed and bank of stream found where type lines narrow.
21	4130 - Aspen	Sapling Well	47.7	17	Unspecified	Some overstory trees left from harvest. Very patchy harvest last time leaving clumps of conifers mixed throughout.
22	4130 - Aspen	Poletimber Well	8.4	43	Unspecified	Wetter upland site. Whole stand is transition zone.
23	4130 - Aspen	Sapling Well	12.3	17	Unspecified	Some overstory trees left from harvest. Very patchy harvest last time leaving clumps of conifers mixed throughout.
24	6115 - Lowland Ash	Poletimber Medium	5.1	91	Unspecified	Drainage. Tag and Cattail.
26	4130 - Aspen	Poletimber Well	71.1	43	Unspecified	Thick understory of Spruce/Fir. Overstory not quite mature yet. Large Pines scattered within stand. Small wet drainages throughout.

S t a n d	Crystal Falls Mgt. Unit			Report 8	B – Forested	Stands Compartment: 108 Year of Entry: 2015
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
28	6124 - Lowland Spruce- Fir	Poletimber Medium	7.6	90	Unspecified	Much mortality on the White Spruce and Balsam Fir. Need salvage ASAP. Very thick understory because overstory is open. Low BA's 10-50. I beleive this portion of Cassidy Creek is not designated trout stream.
29	6120 - Lowland Cedar	Poletimber Well	38.4	73	Unspecified	Open areas are heavy to tag alder. Younger stand. Majority of stand is Cedar.
30	4130 - Aspen	Poletimber Well	27.4	43	Unspecified	Majority of stand is 41 yr old Aspen but some were aged at 78. Much mortality due to budworm. Understory HEAVY to Fir saplings. All being decimated by budworm. Scattered supercanopy pines found. Understory hardwoods are heavily browsed. Could harvest if needed for age class diversity.
30	4130 - Aspen	Poletimber Well	27.4	43	Unspecified	Majority of stand is 41 yr old Aspen but some were aged at 78. Much mortality due to budworm. Understory HEAVY to Fir saplings. All being decimated by budworm. Scattered supercanopy pines found. Understory hardwoods are heavily browsed. Could harvest if needed for age class diversity.

4110 - Sugar Maple Association

31

Poletimber Well

5.7

90

111-140

Poor quality hardwood stand.



Stand	Cover Type	Acres	Managed Site	General Comments:
2	622 - Lowland Shrub	11.8	No	
8	622 - Lowland Shrub	5.7	No	Small Black Ash
11	623 - Emergent Wetland	26.7	No	
12	500 - Water	3.9	No	
18	622 - Lowland Shrub	2.8	No	
19	623 - Emergent Wetland	13.6	No	
25	320 - Upland Shrub	1.1	No	
27	622 - Lowland Shrub	17.4	No	